Honeywell

PD41/PD42 Migration Considerations For PD43

Introduction

This document discusses migration from Intermec's PD41 and PD42 to its replacement, the PD43 industrial printer. Intermec's PD43 includes many modern features, simplified user interfaces and powerful 1:1 device management. The PD43 is also designed for backward compatibility to the PD41/PD42 for most features, including features like Smart Printing and media support. However, there are some differences to be considered for those upgrading from the old to the new printer. We will review each migration consideration and suggest ways to minimize any impacts.

The use of the migration document is best supplemented with PD43 and PD43c User Manual

Supported Printers

This document focuses on the migration considerations from PD41/PD42, however there are a number of new features that are important to notice

Supported Command Languages

The PD43 printer supports the same printer command languages as PD41/PD42 and adds a new Smart Printing language, C#, which makes it easier to develop custom applications. The differences of the supported command languages are captured in the differences documentation, i.e. IPL, ESim and Fingerprint respectively.

New Features

This document focuses on the migration considerations from PD41/PD42, however there are a number of new features that is important to notice.

- Localized User Interface (10 languages)
- Virtual COM support
- RFID HF and UHF
- Bluetooth Support v2.1 + EDR
- Buzzer/Speaker
- RTC as standard
- Linerless Media Support
- Color LCD with Localization Capability
- 8 ips Printing Speed
- CCX Certification v4
- Wireless 802.11n 2.4GHz
- User Replaceable Platen Roller

Environment

PD43 works in a wider range of industrial environments compared to PD41/PD42, as shown here.

	PD43	PD41 / PD42
Operating Temperature	5C to 40C	5C to 40C
Storage Temperature	-40C to 60C	-20C to -50C
Humidity (%RH) Non-condensing	10% - 85%	20% - 85%

Material

PD42 uses sheet metal for its enclosure and base, a plastic front casing and a sheet metal spine.

PD43 uses sheet metal for its enclosure, a plastic front casing and a die-cast upper chassis.

Media Door and Hanger

The PD43 has multiple door options compared to PD41/PD42 that only feature a standard door.

PD43 has two different user installable door covers; one with a flat window on top of the door, and one with a bubble top window (standard) which enables support for 8.375" media rolls.

PD43c is the shorter version of the printer and does not provide for internal media loading, instead an external media hanger is used.

Both PD41/PD42 and PD43 opens the door to the left, but on PD41/PD42 the door stays on top of the printer whereas on PD43 it opens 180 degrees.

The PD41/PD42 media door can be removed by using a Philips screw driver whereas the PD43 requires a Torx driver. In addition, PD43 User Interface is attached to the door.

Printer Size and Weight

The table below provides a comparison of the printer dimensions for the PD41/PD42, and the PD43 in various configurations.

Due to the door opening design the width of the PD43 doubles when the door is open.

	Height	Width	Depth	Weight
PD41 PD42	273mm	270mm	453mm	13kg
PD43				
Flat Door	205mm	211mm	490mm	8.3kg
Standard Dome Door	246mm	211mm	490mm	8.4kg
PD43c				
Std	205mm	211mm	229mm	5.1 Kg
Ext. Hng	205mm	211mm	490mm	6kg

Ext. Hng = External Media Hanger

Supplied Manuals and Accessories

PD43 printers are still supplied with a companion CD containing InterDriver, Bartender Ultralite, PrintSet 5 and user documentation.

Intermec now provides BarTender Ultralite for Intermec instead of LabelShop as a no-cost label design application.

The Intermec Printer Network Manager (IPNM) is no longer provided. Instead use PrintSet 5, the printer's LCD panel or the printer web page to configure the printer. Use the printer web page or a device management tool such as SmartSystems to monitor the printer's status.

PrintSet 5, InterDriver™ and BarTender Ultralite for Intermec are available for download from the Intermec website at http://www.intermec.com/printers/.

Mechanical Distances

The mechanical distances in the print mechanism between PD43 and PD41/PD42 printers are quite different, especially the location of the LSS (Label Stop Sensor); see table below. Due to the difference in distance it may be required to use different start/stop adjust configuration on PD43 compared to PD41/PD42.

	PD43	PD41 / PD42
Tear Bar -> Burn Line	18.7mm	13.25mm
Tear Bar -> LSS	114.7mm	46.1mm
Cutter -> Burn Line	37.1mm	25.6mm

Center Tracking

PD41/PD42 printers are using left-tracking which means the media always align to the spine. In PD43 the print mechanism and label/ribbon path is using center-tracking.

When migrating from a left tracked printer to a center tracked printer the key configuration is the media width. If the media width is configured to the actual physical media width then the position of the output on the label should be the same. This covers the position along the print head, for position along the media path, see previous section.

Media Supply

Media routing is different between PD43 and the PD41/PD42. As with thePD41/PD42, graphical instructions on the PD43 help the user route media.

This table shows media-related specifications differences between the PD43 and PD41/PD42.

	PD43	PD41 / PD42
Max Media Diameter	8.375”*	8.375”*
Media Core Size	1”, 1.5”, 3”	1.5”, 3”
Re-winder Core Size	N/A	1”
Min Media Width	0.75”	1”
Max Media Width	4.65”	4.65”
Min Label Length	0.25”	0.2”
Max Label Length	68”	60”

* 8.375” media roll is supported only if using external media holder or a dome door. Standard flat door supports 5”.

Ribbon Supply

Ribbon routing is different between the PD43 and the PD41/PD42. Graphical instructions on the PD43 help the user route ribbon, which is similar to loading ribbon on a PC43 printer.

PD43 does not support the ribbon low feature but can detect when the ribbon supply has finished.

By default the PD43 does not support ribbon take-up roll without notch. The optional ribbon adapter accessory enables PD43 to support notch free ribbon core.

When changing between inner and outer coated ribbon there is a mechanical switch to swap between ink in and ink out, just like on PD41/PD42.

This table compares ribbon dimensions between the two printers.

PD43 supports only ribbon core with the notches on standard configuration. Optional ribbon core adapter is available as customer installable accessory.

	PD43	PD41 / PD42
Ribbon Support	CSI/CSO*	CSI/CSO*
Max Ribbon Diameter	2.68”	2.99”
Ribbon Core Size	0.5”/1”	1”
Min Ribbon Width	1”	1.8”
Max Ribbon Width	4.33”	4.33”
Max Ribbon Length	11811”	18000”

* Coated Side In/Coated Side Out

Media Support

view types of media supported by PD43 please access “Recommended Media Guide” on the PD43 printer’s web page. Intermec printers and media are optimized to deliver superior performance when used together. Our rigorous testing and co-engineering ensures maximum print head service life, consistently high print quality, and proven label and tag performance in demanding real-world environments.

Recommended media heat settings for PD43 and PD43c are be found in http://www.intermec.com/support/heat-settings/index.aspx.

Self-Strip

Same as the PD41/PD42 the self-strip feature is supported in PD43. The installation of the PD43 front-installed self-strip module is different compared to PD41/PD42. The main difference is that PD43 does not require a liner take-up to provide peeling of labels, also on PD43 there is no liner take-up spindle.

The PD43 self-strip module requires a Philips screw driver for installation whereas the old design was using a thumb screw.

This module can be ordered as an option and is like before user-installable.

Cutter

PD43, same as PD41/PD42, supports a cutter option that is user installable. In PD43 the installation is simplified and only requires two Philips screws and the platen roller to be removed, and then slot in the cutter. There is no cable or connector attached to the cutter which was the case for PD41/PD42.

In addition to normal cutting operation the PD43 cutter also supports partial cut which enables the printer to cut a label or a receipt without it falling to the ground.

Print Head

In PD43 the supported resolutions are 203 and 300dpi, same as in the PD41/PD42 printers. As shown in the table below, the new 203 and 300dpi print heads are the same print width as before.

Print Width	PD43	PD41 / PD42
203dpi	104mm	104mm
300dpi	105.7mm	105.7mm

The print head pressure on PD43 is not adjustable in the same way as on the PD41/PD42. To increase the print head pressure on PD43 a separate set of springs must be ordered as an option and installed into the printer. This may be needed e.g. for certain thick media.

On PD41/PD42 it was possible to loosen two screws on the print head to adjust the burn line position; this is not possible on PD43.

Configuration

The PD43 printer offers more flexibility to configure settings than the PD41/PD42.

In the PD43settings can be changed either remotely (e.g. modern web page or PrintSet 5 for 1:1 device configuration, or SmartSystems), using a USB thumb drive or from the LCD front panel.

Print Speed

The PD43 has a higher maximum print speed, 8ips on 203dpi and 6ips on 300dpi, compared to the maximum of 6ips and 4ips respectively on the PD41/PD42.

Communication Interfaces

This table shows the communication interfaces available for each printer.

	PD43	PD41 / PD42
Internal Ethernet (NIC)	Option	Standard
Serial Port	Option	Standard
USB Device	Standard	Standard
USB Host	Standard	Standard
Parallel Port (Centronics)	Option	Opt-Svc
HF/UHF RFID	Opt-Svc	NA
Wireless 802.11 / Bluetooth	Opt-Svc	Opt-Svc
Bluetooth	Opt-Svc	NA

Opt-Svc: Option, service installable
Opt-Fld: Option, field/user installable
Option: Adapter cable (USB)

PD43 supports two USB Host connectors, whereas PD41/PD42 only supported 1.

User Interface

The PD42 features a single user interface, a two-line monochrome LCD with 22 tactile buttons, whereas the PD41 had a single button with 4 LEDs.

The PD43 supports two interface options: an Icon version and a graphical color LCD with an eight button keypad.

The Icon version provides multiple intuitive error LEDs to describe the error state in the printer. It also provides maintenance icons and a system health indicator.

The LCD version provides an intuitive, multi-language user interface with functions for displaying status and printer configuration.

Connectivity and Power

The connectivity and power cables on PD43c connect to the back of the printer, like most printers.

On PD43 the cable connectors are located underneath the printers and one must turn the printer over to insert the cables. Thanks to routing channels underneath the printer this design helps fasten the cable so that it is not removed by accident.

Users who frequently move the printer around can purchase a connector extension as an option which moves the connector to the back of the printer

Sensors

IN PD41/PD42, the Label Taken Sensor does not require calibration, but on PD43 the sensor must be calibrated using the LCD or manually configured using the icon version. Both sensors are facing up.

The label gap sensor on PD41/PD42 adjusts by moving an arm inside the printer mechanism that moves the sensor across half the print width and it features a white marking indicating the sensor position. The PD43 sensor is easier to adjust and also covers half the media.

In PD42 the LTS feature was standard which is the case also for PD43c, but in PD43 this is an optional feature.

Serviceability/Installation

Tear Bar

On PD43 end users can remove the lower tear bar by using a Philips screw driver; same as on PD41/PD42.

Platen Roller

On PD43 end users can quickly replace the platen roller without using any tool. On thePD41/PD42, platen roller replacement required removal of several mechanical components using special tools.

Thermal Print Head

The print head on PD43 is very easy to change and requires no tools, while the PD41/PD42 requires a slightly more complex procedure where the print head needs to be guided into the connector manually. The print head is user-installable.

When changing between 203 and 300dpi there is no tool required for PD43, whereas PD41/PD42 required a Philips screw driver and several steps

Option Boards

PD43 offers optional The Wireless 802.11/Bluetooth. The PD41/2 provided only an optional Wireless 802.11 card; Bluetooth was not available.

The PD43 wireless module supports 802.11b/g/n CCX v4, while PD41/PD42 supports 802.11b/g CCX v3. All products are WiFi certified.

Software

The PD43 supports the same languages as PD41/PD42 but has an additional Smart Printing language, C#.

There are a number of migration considerations with regards to software. Please refer to the following technology briefs, located at:

http://www.intermec.com/learning/content_library/technology-briefs/index.aspx

- InterDriver Strategic Direction
- IPL Migration Considerations for PM43 and PC-Series Printers
- Fingerprint Migration Considerations
- Font Aliasing for PC series and PM43 Printers
- Font and Language Support in PM43 and PC-Series Printers
- Configuration Migration Considerations

Software Installation

The PD43 replaces the old PD41/PD42 CF card technology with USB thumb drive support, which can be used to install applications, fonts, images, and configure printer settings.

Country Certification

The list of certified countries for PD43 is same as the one for PD41/PD42 printers.

Conclusion

PD43 offers a number of technological and user interface capabilities, and in most of the application can be replacement for PD41/PD42. This document described the considerations to take into account when migrating from the PD41/PD42 to the PD43 and the new printer platform..

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